CBase Design Manual

Overview/Motivation

CBase is a Library that implements the core common data-structures, algorithms, and various other programming challenges outlined in the Reboot-Set. This is both for a base-line for my book-writing work in Rust as well as for interviewing and demonstrating competent and capable knowledge in Computer Science and Programming in general.

Possible avenues of exploration:

* C Ergonomics (programming productivity)
* Inbuilt Memory Manager
  + All objects are allocated, no stack space used for user client data
  + Length, type, perhaps some other metrics for optimization etc like allocation time are always available for ever pointer from the MemoryManagerRegistry

Core CBase Type Structures

CBDataElement – A single instance of Data, with a common interface to be worked on by all kinds of Algorithms and ADTs. This node unit holds the actual data value. To that end, it contains the type and length in addition to the value. The fields of CBDataElement are:

* (void\*) value
* int length
* CBDataElementTypeKind:
  + Boolean
  + The Number Set:
    - Complex, Real, Rational, Integer, Natural
  + Integer
  + Float
  + Complex
  + Fraction

CBString <cbstring.h>

CBLinkedList <cblinkedlist.h>